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ABSTRACT

The purpose of this study is to understand how parental attitudes affect the development of children at risk for psychosocial retardation. The investigation employs measures of maternal attitudes toward self, toward parenting, toward the child, a measure of the quality of the home environment, and measures of children's self-concept, school achievement, and intelligence. The sample was composed of 28 high-risk and 31 low-risk kindergarten and first-grade children and their mothers. The high-risk group included only black children and the low-risk group was predominately white. A preliminary issue was the comparison of high-risk and low-risk children and their mothers on each of the measures employed. Of further interest were the relationships between maternal attitudes and child self-concept. No significant differences between the self-concept of low-risk and of high-risk children were found. There were significant differences between the self-esteem scores and perceptions of low- and high-risk mothers, however. The high-risk mother perceives her child to be more impulsive and less sociable than does the low-risk mother. This finding is consistent with previous comparisons of disadvantaged and middle-class parental self-perception. Figures showing how maternal attitudes relate to children's self-concept, intelligence, and school achievement are presented, first for combined groups and then for the high-risk group only. (Author/RH)

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# Maternal Attitudes and Child Development In High Risk Families*

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Running head: Maternal attitudes

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## Abstract

A general model for school achievement, intelligence, and self-concept was derived from a cross-sectional study of kindergarten and first-grade children and applied to the longitudinal study of a sample of 28 children judged at birth to be at-risk for school failure. The general model linked maternal perception of herself and of the child positively to child achievement and intelligence. In the high-risk model, the risk mother's perception of herself and of the child were related positively and significantly to the quality of the home, and to the child's intelligence. These two models, as well as comparisons between high-risk and low-risk populations, are discussed.

# Maternal Attitudes and Child Development In High-risk families

Lawrence S. Newman and Craig T. Ramey

## Introduction

The influences of a mother's attitudes on the self-concept, intelligence, and school achievement of her young child are of particular interest to the study of psychosocial retardation. Research concerning such influences has considered three issues. First, does the self-concept of the child who is at high risk for psychosocial retardation differ from the self-concept of the low-risk child? Second, how do the mother's attitudes toward herself, her child, and her role as a mother affect the child's self-concept? Third, do these maternal attitudes affect the intelligence and school achievement of low- and of high-risk children? This research is addressed to these questions, and reports the results of a study carried out to begin answering them.

## The Self-Concept of High-Risk and of Low-Risk Children

A major concern in the study of psychosocial retardation has been the comparison of the self-concept of the child who is at high risk for retardation with the self-concept of the low-risk child. Against the backdrop of established differences in IQ performance, this inquiry emanates in part from an "ignorance in bliss" orientation. Despite the fact that the high-risk child has a lower IQ, does he have a positive self-concept? Or, is he happy? Unfortunately, studies comparing the self-concept across socio-economic groupings have yielded no conclusive findings.[19] Researchers have found that the self-concept of the disadvantaged child is lower than,[9] no different from,[5,8] as well as higher than[16, 17] the self-concept of the middle-class child.

The confusion is due partially to the inability of the preschooler to explore feelings about the self[1] and to express these feelings verbally.[11]

There are also conceptual difficulties. When the disadvantaged child is found to have a lower self-concept than the middle-class child, the argument points to the disadvantaged parent's feelings of inferiority,[9] but when findings indicate that the disadvantaged child has a higher self-concept than the middle-class child[16] the disadvantaged parent is seen to expect less of the child and to insulate the child from middle-class standards. This confusion emphasizes the need to better understand the self-perceptions of the disadvantaged parent.

The Self-Perception of High-Risk and Low-Risk Parents

A parent's self-perception is likely to affect attitudes toward child-rearing as well as perceptions of the child. In an investigation of middle-class mothers, Medinnus and Curtis[10] found a strong positive correlation between each of two independent assessments of maternal self-acceptance and a measure of maternal acceptance of her child. A study by Ramey and Campbell[12] has reported that attitudes toward childrearing relate to attitudes about self in low-risk and in high-risk mothers. Risk status of children for mild mental retardation was determined by a psychosocial index reported by Ramey and Smith.[15] In the Ramey and Campbell research, the Parental Attitudes Research Instrument and the Rotter Internal-External measure of locus-of-control were administered to both types of mothers. The high-risk mothers perceived themselves as being much less in control of environmental reinforcement than did the low-risk mothers. As parents, the high-risk mothers described themselves as more authoritarian, less democratic, and less hostile and rejecting than did the low-risk mothers.

There is an intuitive as well as a theoretical[14] linkage among parental attitudes and child self-concept. The Medinnus and Curtis[10] study of middle-class mothers implied, but did not demonstrate, that maternal acceptance of her child and child self-concept are related. In research with disadvantaged populations, Tocco and Bridges[18] reported positive correlations between each of two measures of maternal self-concept and a measure of child self-concept. A comprehensive understanding of how parental attitudes toward self, parenting, and the child relate to the child's self-concept, in low-risk and in high-risk populations, is clearly needed.

Parental Attitudes, Child Intelligence, and School Achievement

A further consideration is how parental attitudes influence the child's cognitive development. Although models of family patterns typically address this relationship,[14] few empirical prospective longitudinal studies have been conducted. A study by Engel and Keane[7] illustrates the influence which maternal attitudes may have on a child's intelligence. In their study a group of 44 black males were followed from birth to 66 months, with assessment of intellectual development at 14, 18, 22, and 66 months. Mothers were rated for "psychological mindedness," the extent to which one perceives others to have psychological, as well as physical, needs. The mothers' psychological mindedness when the boys were 14 months was found to predict the boys' intellectual development, as measured by the Bayley Mental Scale, at 22 months ($r = .46$, $p < .001$) and at 66 months, as measured by the WPPSI ($r = .48$, $p < .05$). These findings suggest that intervention aimed at raising a mother's psychological mindedness may in turn positively influence her child's intelligence.

## The Present Study

The purpose of this investigation is to understand how parental attitudes affect the development of children at risk for psychosocial retardation. The investigation employs measures of maternal attitudes toward self, toward parenting, and toward the child, a measure of the quality of the home environment, and measures of children's self-concept, school achievement, and intelligence. A group of children defined at birth to be high-risk for psychosocial retardation comprise the high-risk population, and an age-matched group randomly chosen from the general population comprise the low-risk group.

A preliminary issue is the comparison of high-risk and low-risk children and mothers on each of the measures employed. Of further interest are the relationships between maternal attitudes and child self-concept. Finally, models to understand how maternal attitudes relate to children's self-concept, intelligence, and school achievement are presented, first for the low-risk and high-risk populations combined and then for the high-risk group only.

# Method

## Subjects

The sample was composed of 28 high-risk and 31 low-risk kindergarten and first-grade children and their mothers. Subjects in the high-risk group were chosen at birth according to scores on a High-Risk Index.[15] Components of the Index included income below $5000/year, low levels of formal maternal and paternal education, work at unskilled jobs, and low maternal IQ, among others. The families varied in their degree of risk as represented by varying scores on the High-Risk Index. Following identification at birth, subjects in the high-risk group were involved in a longitudinal intervention research program.[13] Subjects in the low-risk group were randomly selected from the same kindergarten and first grade classrooms as the high-risk subjects. Low-risk subjects were involved in the research program for one year only.

As shown in Table 1, the high-risk parents were administered the

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Insert Table 1 about here

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Parental Attitudes Research Instrument when the child was 18 months old. At about 54 months, the high-risk homes were evaluated according to Caldwell, Heider, and Kaplan's [3] Home Observation for the Measurement of the Environment scale.

The high-risk group included only black children, whose mean Full Scale Score on the Wechsler Preschool and Primary Scales of Intelligence (WPPSI) at 60 months was 91.00, and whose 60 month Peabody Individual Achievement Test (PIAT) Total Achievement mean score was 100.14. The low-risk group included mostly white children, with a 60 month WPPSI Full Scale mean score of 116.55, and a 60 month PIAT mean score of 126.97.

Procedure

The study employs a set of instruments for the assessment of maternal attitudes toward self, toward parenting, and toward the child, as well as of the quality of the home environment, and of the child's self-concept, intelligence, and school achievement. To assess maternal attitudes toward parenting in the high-risk group, the Parental Attitudes Research Instrument was administered to each mother when her infant was 18 months old. At about 54 months, the quality of the environment of the high-risk home was measured with Caldwell, Heider, and Kaplan's Home Observation for the Measurement of the Environment scale. At 60 months, school achievement was assessed with the PIAT, and intelligence was measured with the WPPSI for both low- and high-risk children. PIAT tests were administered to only 16 low-risk children; WPPSI tests were administered to only 11 low-risk children.

In a single home visit when the child was about 66 months old, low- and high-risk mothers were asked to complete two attitude scales while the child was administered a self-concept test. Mothers were asked to complete Buss and Plomin's[2] Temperament Scales, which consist of 50 items related to parental perception of the child. The Scale yields four scores, one each for parental perception of the child's emotionality, impulsivity, sociability, and activity level. Low scores on the emotionality and impulsivity scales, and high scores on the activity level and sociability scales indicate positive parental perception of the child. Mothers were also asked to complete Coopersmith's[6] Self-Esteem Inventory, a 25-item scale which measures a parent's self-evaluation. To each item (e.g., I have a low-opinion of myself) the respondent may indicate "like me" or "not like me." The Inventory yields a single score, ranging from 0 to 25, with higher scores indicating more positive self-esteem.

The child's self-concept was assessed with Cicirelli's[4] 40-item Purdue Self-Concept Scale. This Scale consists of forced-choice picture situations, for each of which the child is asked to identify with a child in one or the other picture. In one item, for example, the child is asked to decide if he or she is "just like" a child who has many friends or a child who has only a few friends. The Scale yields a single score, ranging from 0 to 40, with higher scores indicating more positive self-concept.

## Results

The mean scores and standard deviations for each of the measures for the high-risk and the low-risk populations are shown in Table 2. Because a

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Insert Table 2 about here

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few subjects did not respond to some questions, there are small differences in the degrees of freedom among the measures.

There were no significant differences in the scores of the high-risk and the low-risk children on the Purdue Self-Concept Scale. There were, however, significant differences on the Self-Esteem Inventory, with high-risk mothers scoring significantly lower than low-risk mothers ($t(55) = 2.73$, $p < .01$). Furthermore, mothers of high-risk children perceived their children differently than did mothers of low-risk children. High-risk children were rated significantly higher on the Impulsivity Scale of the Temperament Scales ($t(46) = 4.10$, $p < .001$) and significantly lower on the Sociability Scale ($t(53) = 2.86$, $p < .01$) than were low-risk children.

The data from the Purdue Self-Concept Scale, the Temperament Scales, and the Self-Esteem Inventory were related to contemporaneous data about these low- and high-risk children. A correlational matrix of these measures along with the child's 60 month WPPSI and PIAT performance is given in Table 3 for the two groups combined. Measures on the Self-Esteem Inventory correlate positively and significantly with the Sociability Scale of the

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Insert Table 3 about here

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Temperament Scales ($r = .29$, $p < .05$), with the child's Full Scale WPPSI ($r = .47$, $p < .005$), and with the PIAT performance ($r = .34$, $p < .05$). The Sociability Scale correlates positively with the child's Full Scale WPPSI ($r = .35$, $p < .05$) and with the PIAT ($r = .49$, $p < .005$). Furthermore, the Impulsivity Scale correlates negatively with the Full Scale WPPSI ($r = -.47$, $p < .05$) and the PIAT ($r = -.53$, $p < .005$). Finally, the Emotionality Scale correlates negatively with the child's school achievement ($r = -.38$, $p < .05$).

The child's score on the Purdue Self-Concept Scale does not correlate significantly with any of the other measures.

The matrix in Table 4 presents the correlations for the longitudinal study of the high-risk children only. The Self-Esteem Inventory correlates

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Insert Table 4 about here

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positively with the Sociability Scale ($r$ = .42, $p < .05$), with the Home Observation for the Measurement of the Environment ($r$ = .41, $p < .05$). The Sociability Scale correlates positively with the child's Full Scale WPPSI ($r$ = .50, $p < .05$) and with the PIAT ($r$ = .47, $p < .05$). The Purdue Self-Concept Scale does not correlate significantly with any of the other measures.

## Discussion

Regardless of the mother's attitudes toward herself, toward her child, and toward parenting, the self-concept of these young children tended to be positive. There are no significant differences between the self-concept of low-risk and of high-risk children. Both groups of children tended to hold positive opinions of themselves. The approximately normal distribution of scores within each population indicates that the high scores on the Purdue Self-Concept Scale are not artifactual.

There are significant differences between the perceptions of low- and of high-risk mothers, however. The high-risk mother has less positive perceptions of herself and of her child than does the low-risk mother. The high-risk mother perceives her child to be more impulsive and less sociable than does the low-risk mother. This finding is consistent with previous comparisons of disadvantaged and middle-class parental self-perceptions.[12]

A plausible path displaying these relationships between mother and child characteristics for the combined low- and high-risk populations is shown in Figure 1. In this model, the mother's perception of herself and of her child are associated. How a mother feels about herself is thus related to how she feels about her child.

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Insert Figure 1 about here

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Maternal attitudes appear, however, to have little influence on the self-concept of kindergarten and first-grade children. Regardless of how mothers perceived themselves or even of how mothers perceived the child, the child tended to have a positive self-concept. How a mother perceives herself and her child is linked to how her child performs in school, however. This general model establishes that the path between maternal attitudes and child outcome is operative in a socioeconomically diverse population.

Figure 2 illustrates the relationships among mother, home, and child characteristics for the high-risk population only. In this model maternal attitudes toward self, toward parenting, and toward her child are inter-

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Insert Figure 2 about here

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related; high-risk mothers who have high self-esteem tend to have positive attitudes toward child-rearing as well as positive perceptions of the child's sociability. Some maternal attitudes are also related directly to child outcome. Maternal perception of the child's sociability is related to the child's intelligence and school achievement. Maternal self-perception is linked to the child's verbal intelligence.

Some of these relationships may be mediated by the quality of the home environment. For example, the high-risk mother's attitudes toward herself and toward parenting influence how she organizes the home; this organization is then related to the child's intelligence. Finally, maternal attitudes and the quality of the home are related to child intelligence but not, at least for these high-risk kindergarteners and first-graders, to the child's self-concept. High-risk mothers with positive attitudes toward self and childrearing tend to have children of higher intelligence.

To define the causal relationships among these maternal attitudinal and child outcome characteristics, experimental analyses are required. However, these findings seem to have one apparently important implication for early intervention programs aimed at psychosocially disadvantaged children. The implication is that it may be effective to involve the mother in early childhood intervention programs. One goal of such involvement might be to provide the mother with a means for understanding better, and perhaps improving, her attitudes toward herself and her child. The more positive attitudes will likely be reflected in the mother's arrangement of the home and her treatment of the child. A supportive program for high-risk mothers is thus seen possibly to benefit the mother as well as the child. However, until further empirical investigation is directed toward validating this pathway it should be regarded as suggested rather than demonstrated.

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Table 1

Means and Standard Deviations for Factor Scores on Parental Attitudes Research Inventory, Home Observation for the Measurement of the Environment, WPPSI, and PIAT for Low-Risk and High-Risk Groups

| Measure | Low-Risk | | | High-Risk | | |
|---|---|---|---|---|---|---|
| | N | Mean | (S.D.) | N | Mean | (S.D.) |
| Parental Attitudes Research Inventory† | | | | | | |
| Authoritarian control | | N.A. | | 28 | 38.28 | (10.87) |
| Hostility-rejection | | N.A. | | 28 | 54.36 | ( 9.76) |
| Democratic attitude | | N.A. | | 28 | 61.28 | ( 5.72) |
| Home Observation for the Measurement of the Environment†† | | N.A. | | 26 | 52.35 | ( 9.66) |
| Peabody Individual Achievement Test††† | 16 | 126.94 | (12.30) | 28 | 100.14 | (14.14) |
| Wechsler Preschool and Primary Scale of Intelligence††† | 11 | 116.55 | (13.60) | 26 | 91.00 | (13.15) |

N.A. = not available

†18 mos. ††54 mos. †††60 mos.

Table 2

Means and Standard Deviations for Self-Esteem Inventory, Temperament Scales, and Purdue Self-Concept Scale for Low-Risk and High-Risk Groups

| Measure | Low-Risk N=31 Mean | (S.D.) | High-Risk N=28 Mean | (S.D.) | df | t |
|---|---|---|---|---|---|---|
| Self-Esteem Inventory† | 19.37 | (3.42) | 16.67 | (4.04) | 55 | 2.73* |
| Temperament Scales† | | | | | | |
| Sociability | 8.23 | (3.40) | 5.84 | (2.66) | 53 | 2.86* |
| Impulsivity | 7.92 | (7.92) | 16.86 | (7.05) | 46 | 4.10** |
| Emotionality | 25.04 | (9.55) | 29.46 | (7.66) | 50 | 1.82 |
| Activity Level | 23.28 | (7.11) | 23.88 | (7.47) | 47 | 0.29 |
| Purdue Self-Concept Scale† | 33.71 | (3.85) | 34.71 | (6.25) | 57 | 0.75 |

* $p < .01$ † 66 mos.

** $p < .001$

## Table 3

### Correlations Between Measures of Maternal Attitudes and of Child Outcomes for Low-Risk and High-Risk Groups Combined

| | Measure | Self-Esteem Inventory | Temperament Scales: Sociability | Impulsivity | Emotionality | Activity Level | Purdue Self-Concep. Scale | Wechsler Scale | Peabody Individual Achievement Test |
|---|---|---|---|---|---|---|---|---|---|
| Maternal Attitudes | Self-Esteem Inventory | | | | | | | | |
| | Temperament Scales | | | | | | | | |
| | Sociability | .29* | | | | | | | |
| | Impulsivity | -.31 | -.31 | | | | | | |
| | Emotionality | -.27 | -.03 | .39** | | | | | |
| | Activity Level | .04 | .18 | .19 | .00 | | | | |
| Child Outcome | Purdue Self-Concept Scale | -.02 | .14 | .16 | .05 | .09 | | | |
| | Wechsler Primary and Preschool Scale of Intelligence | .47*** | .35* | -.47* | -.24 | .06 | -.18 | | |
| | Peabody Individual Achievement Test | .34* | .49*** | -.53*** | -.38* | .10 | -.17 | .84**** | |

*p<.05
**p<.01
***p<.005
****p<.0001

## Table 4

### Correlations Between Measures of Maternal Attitudes, Quality of the Home, and Child Outcomes for the High-Risk Group Only

| | Measure | Self-Esteem Inventory | Temperament Scales: Sociability | Impulsivity | Emotionality | Activity Level | Parental Attitudes Res Inst: Authoritarian Control | Hostility-Rejection | Democratic Attitude | Home Observation for the Measurement of the Environment | Purdue Self-Concept Scale | Wechsler Scales of Intelligence: Full Scale | Verbal Scale | Performance Scale | Peabody Individual Achievement Test |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Behavioral Attributes | Self-Esteem Inventory | | | | | | | | | | | | | | |
| | Temperament Scales | | | | | | | | | | | | | | |
| | Sociability | .42* | | | | | | | | | | | | | |
| | Impulsivity | .05 | -.46* | | | | | | | | | | | | |
| | Emotionality | -.03 | .05 | .25 | | | | | | | | | | | |
| | Activity Level | .29 | .22 | .23 | .02 | | | | | | | | | | |
| | Parental Attitudes Research Instrument | | | | | | | | | | | | | | |
| | Authoritarian control | -.43 | .09 | .32 | -.03 | .09 | | | | | | | | | |
| | Hostility-Rejection | .48* | -.11 | .41 | .06 | .26 | -.37 | | | | | | | | |
| | Democratic attitude | .23 | .09 | -.37 | .00 | -.21 | -.93** | .24 | | | | | | | |
| Home | Home Observation for the Measurement of the Environment | .41* | -.11 | -.22 | -.22 | -.06 | -.68*** | .33 | .40* | | | | | | |
| | Purdue Self-Concept Scale | .02 | .05 | .27 | .21 | .13 | .07 | .05 | .05 | .27 | | | | | |
| Child Outcome | Wechsler Primary and Preschool Scales of Intelligence | | | | | | | | | | | | | | |
| | Full Scale | .33 | .50* | -.31 | -.08 | .31 | -.26 | -.01 | .44* | .39* | -.17 | | | | |
| | Verbal Scale | .41* | .50* | -.38 | -.03 | .22 | -.37 | .11 | .47* | .48* | -.28 | .95**** | | | |
| | Performance Scale | .22 | .46* | -.23 | -.12 | .38 | -.12 | -.14 | .34 | .25 | -.04 | .95**** | .80**** | | |
| | Peabody Individual Achievement Test | .32 | .47* | -.29 | -.31 | .32 | -.01 | .01 | .35 | .33 | -.31 | .70**** | .64*** | .69**** | |

*p< .05
**p< .01
***p< .001
****p< .0001

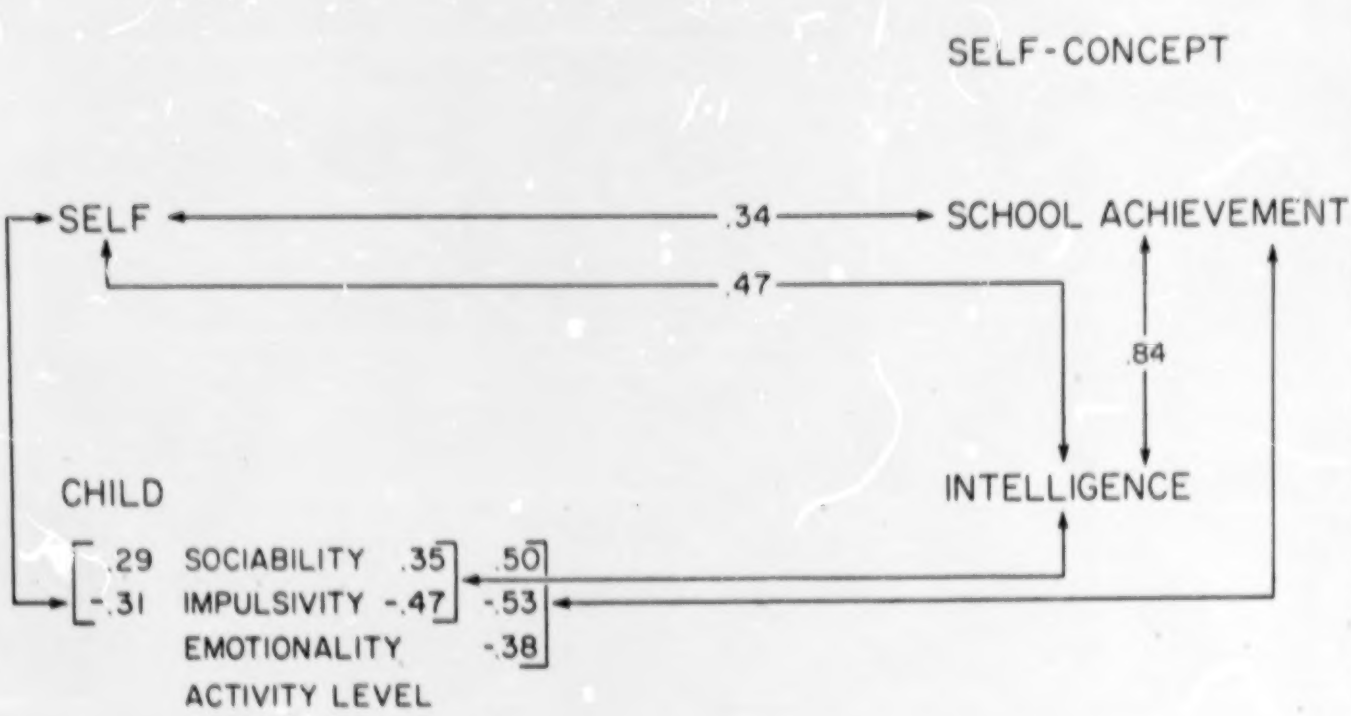
## Figure Captions

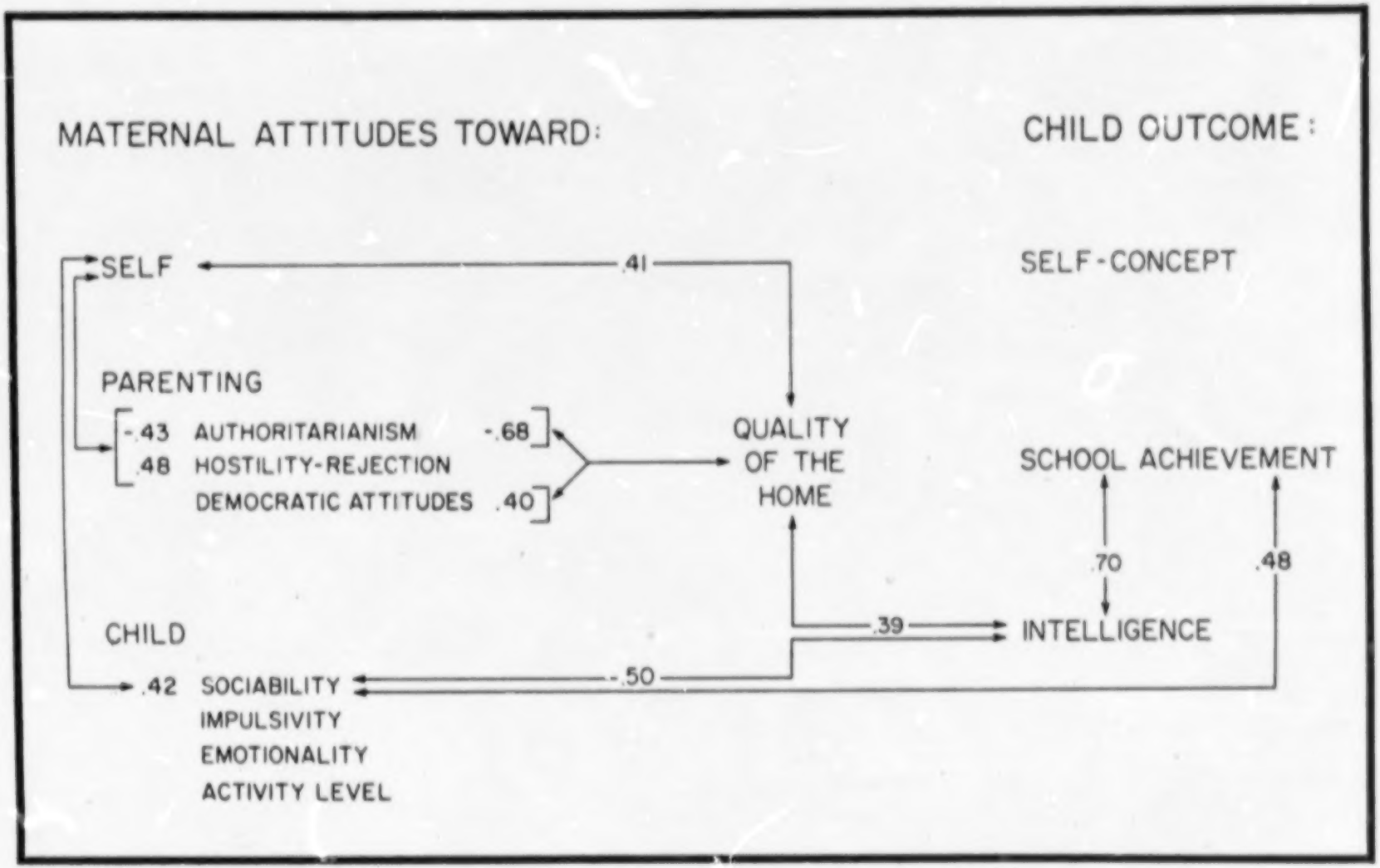
Figure 1. General Model: Path Analysis for Low-Risk and High-Risk Groups Combined.

Figure 2. High-Risk Model: Path Analysis for High-Risk Group Only.

MATERNAL ATTITUDES TOWARD:

CHILD OUTCOME:




MATERNAL ATTITUDES TOWARD:
CHILD OUTCOME:
SELF
.41
SELF-CONCEPT
PARENTING
-.43 AUTHORITARIANISM
.48 HOSTILITY-REJECTION
DEMOCRATIC ATTITUDES .40
-.68
QUALITY OF THE HOME
SCHOOL ACHIEVEMENT
.70
.48
.39
INTELLIGENCE
CHILD
.42 SOCIABILITY
IMPULSIVITY
EMOTIONALITY
ACTIVITY LEVEL
-.50